Case 2749

Eristalis Latreille, 1804, *Helophilus* Fabricius, 1805, *Xylota* Meigen, 1822 and *Eumerus* Meigen, 1822 (Insecta, Diptera): proposed conservation

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Abstract. The purpose of this application is to conserve the names of four genera of hover-flies (family SYRPHIDAE): *Eristalis* Latreille, 1804, *Helophilus* Fabricius, 1805, *Xylota* Meigen, 1822 and *Eumerus* Meigen, 1822. The first three names are threatened by senior objective synonyms and *Eumerus* by a senior homonym. It is proposed to fix *Musca pendula* Linnaeus, 1758 as the type species of *Helophilus* Fabricius, 1805 in accordance with universal usage. All four genera are found almost world wide.

1. The SYRPHIDAE is one of the largest families of Diptera. A number of the generic names which have been in use for nearly 180 years are synonyms or homonyms of unused earlier names. This problem has been discussed by Wirth, Sedman & Weems (1965, pp. 596, 604, 622), Smith & Vockeroth (1980, p. 508), Peck (1988, p. 75) and Thompson & Vockeroth (1989, p. 458). Collin (see BZN **18**: 37–38) proposed Commission action to maintain existing usage of the four generic names, *Eristalis* Latreille, 1804, *Helophilus* Fabricius, 1805, *Xylota* Meigen, 1822 and *Eumerus* Meigen, 1822, but no formal application was published. Names of tribes are based on each of these names.

2. Meigen (1803, p. 274) established the generic name *Elophilus* for a group of species which included *Musca tenax* and *M. pendula*, both of Linnaeus, 1758 (p. 591). Latreille (1804, p. 194) proposed the name *Eristalis* for a similar group of species, which also included *M. tenax* and *M. pendula*. Latreille (1810, p. 443) designated *M. tenax* as the type species of *Elophilus* and the same species is the type of *Eristalis* by the designation of Curtis (1832, pl. 432, text). *Eristalis* is therefore a junior objective synonym of *Elophilus*. The genus containing *M. tenax*, however, has consistently been known as *Eristalis*, and *Elophilus* has not been used as a valid name during this century. I propose that *Elophilus* should be suppressed.

3. Fabricius (1805, p. 233) widened the concept of Latreille's (1804) genus *Eristalis* to include 69 species. He incorporated six species (including *tenax* and *pendula*) of Meigen's (1803) genus *Elophilus* and in listing each of them he emended the spelling of *Elophilus* to *Helophilus*. The latter spelling has been universally adopted. Although published in synonymy *Helophilus* is an available name (Article 11e of the Code) with

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A related application (Case 2730) for the conservation of *Cheilosia* Meigen, 1822 and *Pyrophaena* Schiner, 1860 was received from Drs A.V. Barkalov (*Academy of Sciences of the U.S.S.R., Novosibirsk*) & I.M. Kerzhner (*Academy of Sciences of the U.S.S.R., St Petersburg*) and has now been published (see BZN **48**: 312–315).

authorship ascribed to Fabricius (Article 50g); Leach ([1817], p. 159) adopted the name *Helophilus*, and recorded it as being Meigen's *Elophilus* with the species '*tenax* Latr.'. The type species of *Helophilus* is *Musca tenax* Linnaeus by the designation of Latreille (1810) (see para. 2). In 1822 Meigen divided the species which he had previously referred to *Elophilus* into two groups, using *Eristalis* for the '*tenax* group' (pp. 381–400; 1838, pl. 32, figs. 14–22) and *Helophilus* for the '*pendula* group' (pp. 368–376; 1838, pl. 32, figs. 1–9). This taxonomic arrangement is followed today. Curtis (1832, pl. 429, text) designated *M. pendula* Linnaeus, 1758 as the type species of *Helophilus* sensu Meigen (1822) and Goffe (1944, p. 116) designated the same species as the type of *Helophilus* Fabricius, 1805. It is proposed to set aside the fixation of *tenax* Linnaeus as the type species of *Helophilus*, and to accept the designation by Curtis (1832) of *M. pendula* as the type, so conserving the current usage of the name. Most authors (Goffe (1944) and Kloet & Hincks (1945, p. 379) are exceptions) have attributed *Helophilus* to Meigen, 1822 but, as explained above, the name is available from Fabricius (1805).

4. In 1803 Meigen (p. 273) proposed the name *Eumeros* for two species, *Musca segnis* and *M. pipiens*, both of Linnaeus, 1758 (pp. 594 and 595 respectively), and *Heliophilus* (p. 273) for the single species *M. sylvarum* Linnaeus, 1758 (p. 592). In 1822 Meigen (p. 211; 1838, pl. 28, figs. 19–29) replaced the name *Heliophilus* with *Xylota*, commenting that *Heliophilus* could not be retained because of a similar plant name; he included both species of *Eumeros* (or *Eumerus* Meigen, 1804; see below) in *Xylota*. Coquillet (1910, p. 541) designated *M. segnis* the type species of *Eumeros*. *Xylota* is a junior subjective synonym of *Eumeros* but neither the latter nor *Heliophilus* have been used. I propose that both *Eumeros* and *Heliophilus* be suppressed to conserve the well used name *Xylota*.

5. In 1804 (p. xx) Meigen listed his (1803) taxon *Eumeros* spelt as *Eumerus*. In 1822 (p. 202; 1838, pl. 28, figs. 14–18) he used the latter name for a different syrphid genus for which it has since consistently been used. Curtis (1839, pl. 749, text) designated *Syrphus tricolor* Fabricius, 1798 (p. 563), one of the 12 included species, as the type of *Eumerus* Meigen, 1822. It is not clear whether Meigen (1804) misspelt his (1803) name *Eumeros* as *Eumerus*, or whether the latter was an emendation. As an unjustified emendation *Eumerus* Meigen, 1804 enters into homonymy (Article 33b(iii)) and I propose that this name be suppressed to conserve the established usage of *Eumerus* Meigen, 1822.

6. The larvae of *Eristalis* and *Helophilus*, known as 'rat-tailed maggots', breed in large numbers in decaying organic matter, dung and putrid or stagnant water. They sometimes occur in drinking water and salads and become accidental human parasites, causing myiasis in the intestine (see Smith, 1973). *Eristalis tenax*, the common drone-fly, is cosmopolitan and there are few species of Diptera better known and with as many references in the literature. It has found ideal breeding grounds among stationary human populations and has spread almost world wide. The larvae of *Eumerus strigatus* (Fallén, 1817), the lesser bulb fly, attack and destroy bulbs of *Narcissus*, *Amaryllis* and other species. The genus is well known in Europe and has been introduced into North America and other parts. Species of *Xylota* are common in the sap and wet, rotting wood of the diseased parts of trees. There is thus a considerable literature on the taxonomy, biology and medical and economic importance of the four genera. The names have appeared in the recent taxonomic works of Telford (1970; *Eristalis*), Violovitsh (1979; *Helophilus*) and Hippa (1978; *Xylota*) and a representative list of a further 70 references demonstrating usage of the four names is held by the Commission

Secretariat. All four names are included in the following checklists: Wirth, Sedman & Weems (1965), Knutson, Thompson & Vockeroth (1975), Smith & Vockeroth (1980), Vockeroth & Thompson (1987), Peck (1988), and Thompson & Vockeroth (1989).

7. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers:
  (a) to suppress the following generic names for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:
    (i) *Elophilus* Meigen, 1803;
    (ii) *Eumeros* Meigen, 1803;
    (iii) *Heliophilus* Meigen, 1803;
  (b) to suppress the generic name *Eumerus* Meigen, 1804, and all uses of the name *Eumerus* prior to the publication of *Eumerus* Meigen, 1822, for the purposes of both the Principle of Priority and the Principle of Homonymy;
  (c) to set aside all fixations of type species for the nominal genus *Helophilus* Fabricius, 1805 prior to the designation by Curtis (1832) of *Musca pendula* Linnaeus, 1758;
(2) to place on the Official List of Generic Names in Zoology the following names:
  (a) *Eristalis* Latreille, 1804 (gender: masculine), type species by subsequent designation by Curtis (1832) *Musca tenax* Linnaeus, 1758;
  (b) *Helophilus* Fabricius, 1805 (gender: neuter), type species by subsequent designation by Curtis (1832) *Musca pendula* Linnaeus, 1758, as ruled in (1)(c) above;
  (c) *Xylota* Meigen, 1822 (gender: feminine), type species, by monotypy of the replaced nominal genus *Heliophilus* Meigen, 1803, *Musca sylvarum* Linnaeus, 1758;
  (d) *Eumerus* Meigen, 1822 (gender: masculine), type species by subsequent designation by Curtis (1839) *Syrphus tricolor* Fabricius, 1798;
(3) to place on the Official List of Specific Names in Zoology the following names:
  (a) *tenax* Linnaeus, 1758, as published in the binomen *Musca tenax* (specific name of the type species of *Eristalis* Latreille, 1804);
  (b) *pendula* Linnaeus, 1758, as published in the binomen *Musca pendula* (specific name of the type species of *Helophilus* Meigen, 1822);
  (c) *sylvarum* Linnaeus, 1758, as published in the binomen *Musca sylvarum* (specific name of the type species of *Xylota* Meigen, 1822);
  (d) *tricolor* Fabricius, 1798, as published in the binomem *Syrphus tricolor* (specific name of the type species of *Eumerus* Meigen, 1822);
(4) to place on the Official List of Rejected and Invalid Generic Names in Zoology the following names:
  (a) *Elophilus* Meigen, 1803, as suppressed in (1)(a)(i) above;
  (b) *Eumeros* Meigen, 1803, as suppressed in (1)(a)(ii) above;
  (c) *Heliophilus* Meigen, 1803, as suppressed in (1)(a)(iii) above;
  (d) *Eumerus* Meigen, 1804, as suppressed in (1)(b) above.

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